B. Amendments to the Claims:

Please amend the following claims:

Claims 1-4. Cancelled.

5. (Currently Amended) A CT scanner for scanning of an object comprising:

a tunnel;

a conveyor for moving the object through the tunnel;

a gantry rotatable around the tunnel;

an x-ray source on the gantry for providing an x-ray beam perpendicular to the tunnel;

a first plurality of detectors on the gantry positioned a first distance from the x-ray source;

a second plurality of detectors on the gantry positioned a second distance from the x-ray source, wherein the second distance is less than the first distance;

a third plurality of detectors on the gantry positioned the second distance from the x-ray source ~~The CT scanner of claim 4~~, wherein:

one of the detectors in the first plurality of detectors is positioned within the x-ray beam adjacent to one of the detectors in the second plurality of detectors; and

another one of the detectors in the first plurality of detectors is positioned within the x-ray beam adjacent to one of the detectors in the third plurality of detectors;

the x-ray beam intersects an entire cross section of the tunnel; and

the first, second, and third pluralities of detectors are positioned on the gantry so that the entire x-ray beam intersects at least one detector.

Claim 6. Cancelled

7. (Currently Amended) A CT scanner for scanning of an object comprising:

a tunnel;

a conveyor for moving the object through the tunnel;

a gantry rotatable around the tunnel;

an x-ray source on the gantry for providing an x-ray beam perpendicular to the tunnel;

a first plurality of detectors on the gantry positioned a first distance from the x-ray source; and a second plurality of detectors on the gantry positioned a second distance from the x-ray source, wherein the second distance is less than the first distance~~The CT scanner of claim 1~~,

wherein an angle between beams from the x-ray source to adjacent detectors in the first plurality of detectors is the same as an angle between beams from the x-ray source to adjacent detectors in the second plurality of detectors.

Claims 8-13. Cancelled

14. (Currently Amended) A CT scanner for scanning of an object comprising:

a tunnel;

a conveyor for moving the object through the tunnel;

a gantry rotatable around the tunnel;

an x-ray source on the gantry for providing an x-ray beam perpendicular to the tunnel;

a first plurality of detectors on the gantry positioned a first distance from the x-ray source; and

a second plurality of detectors on the gantry positioned a second distance from the x-ray source, wherein the second distance is less than the first distance~~The CT scanner of claim 1~~,

wherein each detector in the first and second plurality of detectors includes:

a first photodiode layer responsive to x-ray energy at a first energy level, the first photodiode layer having a first x-ray reception area; and

a second photodiode layer responsive to x-ray energy at a second energy level higher than the first energy level, positioned behind the first photodiode layer relative to the x-ray source, and having a second x-ray reception area larger than the first x-ray reception area.

15. (Original) The CT scanner of claim 14, wherein each detector further includes a shielding layer between the first and second photodiode layers.

16. (Original) The CT scanner of claim 15, wherein first x-ray reception area and second x-ray reception areas are sized so that the x-ray flux levels for the first photodiode layer and second photodiode layer are substantially equal.

Claims 17-20. Cancelled.

21. (Currently Amended) A baggage processing system comprising:

a plurality of CT scanners for scanning a bag, each of the CT scanners comprising:

a tunnel;

a conveyor for moving the object through the tunnel;

a gantry rotatable around the tunnel;

an x-ray source on the gantry for providing an x-ray beam perpendicular to the tunnel;

a first plurality of detectors on the gantry positioned a first distance from the x-ray source; and

a second plurality of detectors on the gantry positioned a second distance from the x-ray source, wherein the second distance is less than the first distance;

a third plurality of detectors on the gantry positioned the second distance from the x-ray source; and

~~including~~ a computer for processing data from the CT scanner and for reconstructing an image of least a portion of the bag;

wherein:

one of the detectors in the first plurality of detectors is positioned within the x-ray beam adjacent to one of the detectors in the second plurality of detectors;

another one of the detectors in the first plurality of detectors is positioned within the x-ray beam adjacent to one of the detectors in the third plurality of detectors;

the x-ray beam intersects an entire cross section of the tunnel; and

the first, second, and third pluralities of detectors are positioned on the gantry so that the entire x-ray beam intersects at least one detector;

at least one operator review station for displaying a reconstructed image; and

a network for transferring a reconstructed image from at least one CT scanner to the at least one operator review station for display.

22. (Original) The baggage processing system of claim 21, wherein the computer in each of the CT scanners includes means for detecting a potential threat in a bag based upon reconstructed image, and

wherein a reconstructed image is transferred to the at least one operator review station upon detection of a potential threat.

23. (Original) The baggage processing system of claim 22, wherein at least one of the plurality of CT scanners is located at an airline check-in desk.

24. (Original) The baggage processing system of claim 22, wherein at least one of the plurality of CT scanners is located at an airport security check-point.

25. (Original) The baggage processing system of claim 22, wherein at least one of the plurality of CT scanners is located at an airport curb-side check-in area.

26. (Original) The baggage processing system of claim 22, wherein at least one of the plurality of CT scanners is located at a location other than an airport to which bags are to be transported.

27. (Currently Amended) A baggage check-in system comprising:

a first check-in station for passengers to check-in for a flight and to check baggage;

a second check-in station for passengers to check-in for a flight and to check baggage; and

a CT scanner positioned between the first check-in station and the second check-in station, the CT scanner comprising:

a tunnel;

a conveyor for moving the object through the tunnel;

a gantry rotatable around the tunnel;

an x-ray source on the gantry for providing an x-ray beam perpendicular to the tunnel;

a first plurality of detectors on the gantry positioned a first distance from the x-ray source;

a second plurality of detectors on the gantry positioned a second distance from the x-ray source, wherein the second distance is less than the first distance;

a third plurality of detectors on the gantry positioned the second distance from the x-ray source; and wherein:

one of the detectors in the first plurality of detectors is positioned within the x-ray beam adjacent to one of the detectors in the second plurality of detectors;

another one of the detectors in the first plurality of detectors is positioned within the x-ray beam adjacent to one of the detectors in the third plurality of detectors;

the x-ray beam intersects an entire cross section of the tunnel; and

the first, second, and third pluralities of detectors are positioned on the gantry so that the entire x-ray beam intersects at least one detector.

28. (Original) The baggage check-in system of claim 27, wherein the CT scanner includes:

a tunnel positioned between the first check-in station and the second check-in station; and

a conveyor through the tunnel to move bags from a first side of the first and second check-in stations to a second side of the first and second check-in stations; and

wherein the baggage check-in system further comprises a baggage handling system for removing bags from the second side of the first and second check-in stations for transport to an aircraft.

29. (Currently Amended) The baggage check-in system of claim 28~~7~~, wherein the CT scanner includes a computer for detecting a potential threat in a bag prior to moving a bag to the baggage handling system.

Claims 30 and 31. Cancelled.

32. (New) A baggage processing system comprising:

a plurality of CT scanners for scanning a bag, each of the CT scanners comprising:

a tunnel;

a conveyor for moving the object through the tunnel;

a gantry rotatable around the tunnel;

an x-ray source on the gantry for providing an x-ray beam perpendicular to the tunnel;

a first plurality of detectors on the gantry positioned a first distance from the x-ray source;

a second plurality of detectors on the gantry positioned a second distance from the x-ray source, wherein the second distance is less than the first distance; and

a computer for processing data from the CT scanner and for reconstructing an image of least a portion of the bag;

wherein an angle between beams from the x-ray source to adjacent detectors in the first plurality of detectors is the same as an angle between beams from the x-ray source to adjacent detectors in the second plurality of detectors;

at least one operator review station for displaying a reconstructed image; and

a network for transferring a reconstructed image from at least one CT scanner to the at least one operator review station for display.

33. (New) The baggage processing system of claim 32, wherein the computer in each of the CT scanners includes means for detecting a potential threat in a bag based upon reconstructed image, and

wherein a reconstructed image is transferred to the at least one operator review station upon detection of a potential threat.

34. (New) The baggage processing system of claim 33, wherein at least one of the plurality of CT scanners is located at an airline check-in desk.

35. (New) The baggage processing system of claim 33, wherein at least one of the plurality of CT scanners is located at an airport security check-point.

36. (New) The baggage processing system of claim 33, wherein at least one of the plurality of CT scanners is located at an airport curb-side check-in area.

37. (New) The baggage processing system of claim 33, wherein at least one of the plurality of CT scanners is located at a location other than an airport to which bags are to be transported.

38. (New) A baggage check-in system comprising:

a first check-in station for passengers to check-in for a flight and to check baggage;

a second check-in station for passengers to check-in for a flight and to check baggage; and

a CT scanner positioned between the first check-in station and the second check-in station, the CT scanner comprising:

a tunnel;

a conveyor for moving the object through the tunnel;

a gantry rotatable around the tunnel;

an x-ray source on the gantry for providing an x-ray beam perpendicular to the tunnel;

a first plurality of detectors on the gantry positioned a first distance from the x-ray source; and

a second plurality of detectors on the gantry positioned a second distance from the x-ray source, wherein the second distance is less than the first distance;

wherein an angle between beams from the x-ray source to adjacent detectors in the first plurality of detectors is the same as an angle between beams from the x-ray source to adjacent detectors in the second plurality of detectors.

39. (New) The baggage check-in system of claim 38, wherein the CT scanner includes:

a tunnel positioned between the first check-in station and the second check-in station; and a conveyor through the tunnel to move bags from a first side of the first and second check-in stations to a second side of the first and second check-in stations; and

wherein the baggage check-in system further comprises a baggage handling system for removing bags from the second side of the first and second check-in stations for transport to an aircraft.

40. (New) The baggage check-in system of claim 39, wherein the CT scanner includes a computer for detecting a potential threat in a bag prior to moving a bag to the baggage handling system.

41. (New) A baggage processing system comprising:

a plurality of CT scanners for scanning a bag, each of the CT scanners comprising:

a tunnel;

a conveyor for moving the object through the tunnel;

a gantry rotatable around the tunnel;

an x-ray source on the gantry for providing an x-ray beam perpendicular to the tunnel;

a first plurality of detectors on the gantry positioned a first distance from the x-ray source;

a second plurality of detectors on the gantry positioned a second distance from the x-ray source, wherein the second distance is less than the first distance; and

a computer for processing data from the CT scanner and for reconstructing an image of least a portion of the bag;

wherein each detector in the first and second plurality of detectors includes:

a first photodiode layer responsive to x-ray energy at a first energy level, the first photodiode layer having a first x-ray reception area; and

a second photodiode layer responsive to x-ray energy at a second energy level higher than the first energy level, positioned behind the first photodiode layer relative to the x-ray source, and having a second x-ray reception area larger than the first x-ray reception area;

at least one operator review station for displaying a reconstructed image; and a network for transferring a reconstructed image from at least one CT scanner to the at least one operator review station for display.

42. (New) The baggage processing system of claim 41, wherein the computer in each of the CT scanners includes means for detecting a potential threat in a bag based upon reconstructed image, and

wherein a reconstructed image is transferred to the at least one operator review station upon detection of a potential threat.

43. (New) The baggage processing system of claim 42, wherein at least one of the plurality of CT scanners is located at an airline check-in desk.

44. (New) The baggage processing system of claim 42, wherein at least one of the plurality of CT scanners is located at an airport security check-point.

45. (New) The baggage processing system of claim 42, wherein at least one of the plurality of CT scanners is located at an airport curb-side check-in area.

46. (New) The baggage processing system of claim 42, wherein at least one of the plurality of CT scanners is located at a location other than an airport to which bags are to be transported.

47. (New) A baggage check-in system comprising:

a first check-in station for passengers to check-in for a flight and to check baggage;

a second check-in station for passengers to check-in for a flight and to check baggage; and

a CT scanner positioned between the first check-in station and the second check-in station, the CT scanner comprising:

a tunnel;

a conveyor for moving the object through the tunnel;

a gantry rotatable around the tunnel;

an x-ray source on the gantry for providing an x-ray beam perpendicular to the tunnel;

a first plurality of detectors on the gantry positioned a first distance from the x-ray source; and

a second plurality of detectors on the gantry positioned a second distance from the x-ray source, wherein the second distance is less than the first distance; and

wherein each detector in the first and second plurality of detectors includes:

a first photodiode layer responsive to x-ray energy at a first energy level, the first photodiode layer having a first x-ray reception area; and

a second photodiode layer responsive to x-ray energy at a second energy level higher than the first energy level, positioned behind the first photodiode layer relative to the x-ray source, and having a second x-ray reception area larger than the first x-ray reception area.

48. (New) The baggage check-in system of claim 47, wherein the CT scanner includes:

a tunnel positioned between the first check-in station and the second check-in station; and

a conveyor through the tunnel to move bags from a first side of the first and second check-in stations to a second side of the first and second check-in stations; and

wherein the baggage check-in system further comprises a baggage handling system for removing bags from the second side of the first and second check-in stations for transport to an aircraft.

49. (New) The baggage check-in system of claim 48, wherein the CT scanner includes a computer for detecting a potential threat in a bag prior to moving a bag to the baggage handling system.